

WHAT IS CLAIMED IS:

1. A reinforced magnetic resonance imaging catheter, comprising:

an elongated body having at least one lumen extending therethrough, the elongated body further comprising a proximal end, a distal end, a circumference, a longitudinal axis running between said proximal and distal ends, and a coaxial layer that incorporates at least one elongated ceramic member; and an antenna operably disposed proximate the distal end of the elongated body.

2. The reinforced magnetic resonance imaging catheter of claim 1 wherein the elongated ceramic member is substantially covered with a coating.

3. The reinforced magnetic resonance imaging catheter of claim 2, wherein the coating is a polymeric coating.

4. The reinforced magnetic resonance imaging catheter of claim 2, wherein the coating includes a pyrolytic carbon material.

5. The reinforced magnetic resonance imaging catheter of claim 1, wherein the elongated ceramic member is of an overall flexibility that it can be bent without breaking.

6. The reinforced magnetic resonance imaging catheter of claim 1, wherein the coaxial layer is a woven layer of fibers that reinforce the elongated body and the elongated ceramic member is a ceramic fiber woven into the woven layer.

7. The reinforced magnetic resonance imaging catheter of claim 1, wherein the elongated ceramic member is wrapped around the elongated body.

8. The reinforced magnetic resonance imaging catheter of claim 1, wherein the elongated ceramic member includes a silicon carbide material.

9. The reinforced magnetic resonance imaging catheter of claim 1, wherein the elongated ceramic member includes a carbon material.

10. The reinforced magnetic resonance imaging catheter of claim 1, wherein the elongated ceramic member includes an aluminum oxide material.

11. An elongated medical device for intravascular manipulation during magnetic resonance imaging of body tissue, comprising:

an elongated body; and

a reinforcement mechanism disposed about a portion of said elongated body, the

reinforcement mechanism comprising at least one elongated ceramic member.

12. The elongated medical device of claim 11, wherein the elongated ceramic member is substantially covered with a coating.

13. The elongated medical device of claim 12, wherein the coating is a polymeric coating.

14. The elongated medical device of claim 12, wherein the coating includes a pyrolytic carbon material.

15. The elongated medical device of claim 11, wherein the elongated ceramic member is of an overall flexibility that it can be bent without breaking.

16. The elongated medical device of claim 11, wherein the reinforcement mechanism is a woven layer of fibers that reinforce the elongated body and the elongated ceramic member is a ceramic fiber woven into the woven layer.

17. The elongated medical device of claim 11, wherein the elongated ceramic member is wrapped around the elongated body.

18. The elongated medical device of claim 11, wherein the elongated ceramic member includes a silicon carbide material.

19. The elongated medical device of claim 11, wherein the elongated ceramic member includes a carbon material.

20. The elongated medical device of claim 11, wherein the elongated ceramic member includes an aluminum oxide material.

21. A reinforcement member for reinforcing an elongated intravascular magnetic resonance imaging device, the reinforcement member comprising:
an elongated ceramic fiber; and
a coating disposed about the elongated ceramic fiber.

22. The reinforcement member of claim 21, wherein the coating is a polymeric coating.

23. The reinforcement member of claim 21, wherein the coating includes a pyrolytic carbon material.

24. The reinforcement member of claim 21, wherein the elongated ceramic fiber is of an overall flexibility that it can be bent without breaking.

25. The reinforcement member of claim 21, wherein the elongated ceramic fiber includes surface scratches that are substantially filled by the coating, enabling a general flexibility wherein the ceramic fiber can be bent without breaking.

26. The reinforcement member of claim 21, wherein the elongated ceramic fiber includes a silicon carbide material.

27. The reinforcement member of claim 21, wherein the elongated ceramic fiber includes a carbon material.

28. The reinforcement member of claim 21, wherein the elongated ceramic fiber includes an aluminum oxide material.